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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,219	02/12/2002	Steven J. West	04518/00019	6185
22910	7590	11/03/2004	EXAMINER	
BANNER & WITCOFF, LTD. 28 STATE STREET 28th FLOOR BOSTON, MA 02109-9601			VESTAL, REBECCA M	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,219

Applicant(s)

WEST ET AL.

Examiner

R. Michelle Vestal

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2002 and 15 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2-9, 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-13 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/29/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species F in the reply filed on October 15, 2004 is acknowledged.

Claims 2-9, 14 and 15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 15, 2004.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: glass pH bulb "4". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

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amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

The phrase "may be, but is not limited to" does not impart a limitation on claim 12. If the invention is to be limited to having a silicone elastomer septum with a durometer of from about 30 to about 45, then this phrase should be replaced with the word "is."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,608,148 to Frollini, Jr. et al., referred to hereafter as Frollini, in view of U.S. Patent No. 5,362,577 to Pedicini.

Regarding Claim 1, Frollini discloses a combination glass pH electrode (Col. 1, lines 7-8), the standard potential of which is stabilized (Col. 1, lines 8-10) by means of the following structural modification:

(f) incorporation of a reference electrolyte compartment vent (Fig. 1, **50**) that admits sufficient air to permit flow of reference electrolyte through the liquid junction under the influence of gravity.

Frollini does not disclose expressly that the reference electrolyte compartment vent minimizes moisture loss or pick-up from the surroundings.

Pedicini discloses an electrochemical cell with an electrolyte compartment vent that minimizes moisture loss or pick-up from the surroundings (Col. 5, lines 8-11).

Frollini and Pedicini are analogous art because they are from a similar problem solving area, viz., minimizing electrolyte loss or leakage in an electrochemical cell.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the electrolyte compartment vent of Pedicini with the combination pH electrode of Frollini because such a vent system minimizes the loss of electrolyte from the electrochemical cell and prevents contaminants from entering the cell, as taught by Pedicini (Col. 10, lines 57-60). Minimizing electrolyte loss would require less frequent refilling of the reference electrolyte compartment, thereby resulting

in less maintenance time and cost. Reducing the exposure of the electrolyte solution to contaminants would help ensure reproducibility in measured responses and prolong the useful life of the electrode.

Therefore, it would have been obvious to combine Frollini with Pedicini to obtain the invention as specified in Claim 1.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frollini and Pedicini as applied to claim 1 above, and further in view of U.S. Patent No. 5,143,621 to Bartram et al., referred to hereafter as "Bartram," as evidenced by Aldrich Chemical Company, Inc. catalog.

Regarding Claims 10 and 11, Pedicini discloses an electrochemical cell where the opening to the electrolyte compartment is sufficiently small to prevent contaminants from entering the cell (Col. 3, lines 40-45) and to prevent loss of electrolyte (Col. 12, lines 30-32). Pedicini also discloses that the area of the opening is 0.0003 square inches (or a diameter of 0.5 mm) (Col. 12, lines 33-35).

Pedicini does not disclose that the opening to the reference electrolyte compartment is covered with an elastomeric septum closure that is perforated to permit insertion of a tube.

Bartram discloses a venting system comprising an elastomeric septum closure (Col. 4, lines 26-27) that is perforated to permit insertion of a tube or needle with a small inside diameter compared to its length (Col. 4, lines 31-33). Bartram also discloses that the tube in the septum is a 25 gauge, 5/8 inch long needle (Col. 4, lines 31-33). The Aldrich Chemical Company, Inc. 1992 catalog discloses that a 25 gauge needle has a nominal inner diameter of about 0.3 mm (Page 1990).

Pedicini and Bartram are analogous art because they are from a similar problem solving area, viz., venting systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to replace the venting system of Pedicini with the elastomeric septum perforated by a hollow tube of Bartram because both structures provide equivalent venting means. The elastomeric septum perforated by a needle venting means of Bartram also provides an inexpensive and convenient way, utilizing commercially available materials, to vent the cell instead of relying on costly microfabricating techniques such as machining or etching to create a vent hole of millimeter size dimensions.

Therefore, it would have been obvious to combine Pedicini with Bartram to obtain the inventions as specified in Claims 10 and 11.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frollini and Pedicini as applied to claim 1 above, and further in view of Bartram and U.S. Patent No. 5,575,769 to Vaillancourt.

Regarding Claims 12 and 13, Pedicini discloses an electrochemical cell where the opening to the electrolyte compartment is sufficiently small to prevent contaminants from entering the cell (Col. 3, lines 40-45) and to prevent loss of electrolyte (Col. 12, lines 30-32). Pedicini also discloses that the area of the opening is 0.0003 square inches (or a diameter of 0.5 mm) (Col. 12, lines 33-35).

Pedicini does not disclose that the opening to the reference electrolyte compartment is covered with an elastomeric septum closure with a slit that can be pried open with a delivery tip to replenish electrolyte in the compartment.

Bartram discloses a venting system comprising a silicone septum closure (Col. 4, lines 26-27) that is perforated to permit insertion of a needle (Col. 4, lines 31-33).

Vaillancourt discloses an elastomeric septum provided with a slit which typically penetrates the entire length of the septum and facilitates passage of a needle through the septum (Col. 1, lines 33-37), which was commercially available at the time the

invention was made (Col. 7, lines 62-63). Vaillancourt also discloses that the elastomeric slit septum used may have a Shore A hardness of from 25-60 (Col. 2, lines 58-62).

Pedicini and Bartram are analogous art because they are from a similar problem solving area, viz., venting systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to replace the venting system of Pedicini with the elastomeric septum perforated by a needle venting means of Bartram because both structures provide equivalent venting means. The elastomeric septum perforated by a needle venting means of Bartram also provides an inexpensive and convenient way, utilizing commercially available materials, to vent the cell instead of relying on costly microfabricating techniques such as machining or etching to create a vent hole of millimeter size dimensions. Furthermore, it would have been obvious to a person of ordinary skill in the art to use a slit septum in the venting system to avoid obstructing the fluid path of the needle with cored out septum material as the needle penetrates the septum and to facilitate passage of the needle through the septum, as taught by Vaillancourt (Col. 1, lines 29-37).

Therefore, it would have been obvious to combine Pedicini with Bartram and Vaillancourt to obtain the inventions as specified in Claims 12 and 13.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Michelle Vestal whose telephone number is (571) 272-0524. The examiner can normally be reached on Monday-Friday, 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rmv/Rmv
October 28, 2004


NAM NGUYEN
SUPERVISORY PATENT EXAMINER
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